

REMARKS

Status of the Application

Claims 1, 2 and 7-19 are pending in the application. The Examiner has indicated that should claim 13 be found allowable, claim 17 will be objected to under 37 C.F.R. § 1.75 as being a substantial duplicate thereof. Claims 1, 2, 7-9 and 11-19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Matsui et al. (U.S. Publication 2003/0128273). Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsui et al. (U.S. Publication 2003/0128273) as applied to claims 1, 2, 7-9 and 11-19 above, and further in view of Aucsmith et al. (U.S. Patent 6,873,723) and Rashkovskiy et al. (U.S. Patent 6,563,536).

By this Amendment, Applicants are canceling claim 17, and amending claim 18.

Double Patenting

The Examiner has indicated that should claim 13 be found allowable, claim 17 will be objected to under 37 C.F.R. § 1.75 as being a substantial duplicate thereof.

Applicants hereby cancel claim 17 to obviate the rejection.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 2, 7-9 and 11-19 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Matsui et al. (U.S. Publication 2003/0128273).

Claim 1 recites, in part, “performs a process of reducing a difference of at least one of the pair of images other than a geometric difference between image structures corresponding to the parallax of both eyes” and “wherein the difference other than the geometric difference between

the image structures corresponding to the parallax of both eyes is a difference between noise components superposed on the pair of images.” The Examiner alleges that Matsui discloses all of the elements of claim 1. Applicants respectfully disagree.

Firstly, with respect to the argument that Matsui fails to disclose “reducing a difference ... corresponding to a parallax of both eyes,” the Examiner argues that whether or not the brightness difference corrected by Matsui is caused by a difference in the exposure control units, the difference is *NOT corresponding to the parallax of both eyes*. See page 2 of the instant Office Action. However, the Examiner is mistaking the claim language of claim 1. Claim 1 reduces a difference corresponding to a parallax of both eyes (but not a geometric difference). Matsui, as conceded by the Examiner, corrects a difference (brightness) that is NOT corresponding to a parallax of both eyes. Thus, claim 1 is patentable, as Matsui fails to disclose this aspect of claim 1.

Secondly, with regard to “the geometric difference between the image structures ... is a difference between noise components superposed on the pair of images,” the Examiner alleges that “sensors ... typically introduce random noise into captured image frames.” See page 5 of the instant Office Action. Therefore, the Examiner alleges that because Matsui corrects a brightness difference between image pairs, it *inherently* corrects the difference between superimposed noise as well, since, as discussed above, the superimposed noise contributes to the overall difference. See page 5 of the instant Office Action. “Inherency, however may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a

given set of circumstances is not sufficient.”¹ In the instant rejection, the Examiner alleges that because a lightness/brightness difference is corrected, then it is inherent that noise correction also occurs. However, the Examiner has no basis for making this statement other than it might work in that manner. This argument runs afoul of the Federal Circuit’s statement cited above. While the Examiner argues that “the noise contributes to the difference between any stereo image pair (since they will have random effects on the two images; for example, the intensity or color value of a pixel in one of the images may be increased due to noise but is decreased by noise in its corresponding pixel in the other image of the pair).” If the noise is as random as the Examiner alleges, then it is equally likely that the noise in both pixel pairs would amplify one another, not cancel each other out. Therefore, Matsui cannot clearly disclose that the noise is corrected, as alleged by the Examiner.

Further, Applicants submit that if one object is photographed by two cameras located geometrically separately, the pair of image data formed by the cameras include the following two differences: one is the inevitable optical difference ("a parallax of both eyes") due to the geometrically separate location of the cameras, and the second is the different contamination noise patterns or different photographic conditions due to the different cameras.

¹ Continental Can Co. USA Inc. v. Monsanto Co., 948 F.2d 1264, 1269 (Fed. Cir. 1991) (citing In re Oelrich, 666 F.2d 578, 581 (Fed. Cir. 1981) (quoting Hansgirk v. Kemmer, 102 F.2d 212, 214 (C.C.P.A. 1939))) (emphasis in original); see also Scaltech Inc. v. Retec/Tetra L.L.C., 51 U.S.P.Q.2d 1055, 1059 (Fed. Cir. 1999); and In re Robertson, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999).

The first optical difference is useful information that allows an observer to obtain a stereo image sensation in the brain. By contrast, the second difference is unrelated to the stereo image sensation; instead, it is detrimental information when forming a stereoscopic view.

Claim 1 recites an apparatus for correcting the undesirable effect of the second difference noted above, while maintaining the first optical difference. In order to reduce the effects of detrimental information on a stereoscopic view, an exemplary embodiment of the present invention separates the useful component comprising stereoscopic information from the detrimental component unrelated to stereoscopic information, and reduces the detrimental component of the image data.

Cited references Matsui (U.S. Pat. Pub. No. 2003/0128273), Aucsmith (U.S. Pat. No. 6,873,723), and Rashkovskiy (U.S. Pat No. 6,563,536) fail to disclose separating the detrimental component and useful component of the image data. Further, although the brightness difference is corrected by Matsui, detrimental noise patterns cannot be reduced or removed at all thereby. Additionally, in the exemplary embodiment of the present invention, the method of separating the detrimental component can be an image perceiving technique or frequency analysis.

Claim 1 is thus patentable over the applied art, as Matsui fails to disclose wherein the difference other than the geometric difference between the image structures corresponding to the parallax of both eyes is a difference between noise components, as recited in claim 1. Claims 2, 3, 7-9, 11, 12, 15 and 16 are patentable at least by virtue of their dependency from claim 1. Claims 13 and 14 recites similar limitations to claim 1, and are patentable for reasons analogous thereto. Claims 18 and 19 are patentable at least by virtue of their dependency from claim 13.

Claim Rejections - 35 U.S.C. § 103

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsui et al. (U.S. Publication 2003/0128273) as applied to claims 1, 2, 7-9 and 11-19 above, and further in view of Aucsmith et al. (U.S. Patent 6,873,723) and Rashkovskiy et al. (U.S. Patent 6,563,536).

Claim 10 is dependent from claim 1. Because Matsui fails to disclose all of the elements of claim 1, and because Aucsmith and Rashkovskiy fail to cure the deficient disclosure of Matsui, claim 10 should be patentable over the applied art at least by virtue of its dependency from claim 1, and also due to the deficiencies of claim 16 and 18 as set forth above.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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